

SEQUENCE LISTING

<110> Francis, Kevin P.  
Contag, Pamela R.  
Joh, Danny J.

<120> LUCIFERASE EXPRESSION CASSETTES AND METHODS OF USE

<130> 9400-0006P

<140>  
<141>

<160> 26

<170> PatentIn Ver. 2.0

<210> 1  
<211> 6  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Gram-positive  
ribosome binding site

<400> 1  
aggagg

6

<210> 2  
<211> 41  
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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Primer XAF3

<400> 2  
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41

<210> 3  
<211> 36  
<212> DNA  
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Primer XAR

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ggcggatccg tcgacttaat ataatagcga acgttg

36

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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Primer XBF

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gggaattctc gaggaggaga gaaagaaaatg aaatttgga

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<210> 5

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer XBR

<400> 5

ggcgatccg tcgacttagg tatattccat gtggta

37

<210> 6

<211> 34

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Primer XCF

<400> 6

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34

<210> 7

<211> 37

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Primer XCR

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37

<210> 8

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer XDF

<400> 8

gggaattctc gaggaggagt aaaagtatgg aaaatga

37

<210> 9

<211> 37

<212> DNA  
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<223> Description of Artificial Sequence: Primer XDR

<400> 9  
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<210> 10  
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<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer XEF

<400> 10  
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<210> 11  
<211> 38  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer XER

<400> 11  
ggcggatccg tcgacttaac tatcaaacgc ttccgtta 38

<210> 12  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: LUXA-REV

<400> 12  
ccacactcct cagagatgct 20

<210> 13  
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<212> DNA  
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<223> Description of Artificial Sequence: BamH I  
recognition sequence

<400> 13  
ggatcc 6

<210> 14  
<211> 37  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: vector  
sequence

<400> 14  
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37

<210> 15  
<211> 645  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: pMK4 luxABCDE  
Sa1

<400> 15  
atttatctaa agatgagatt aagccaatag aacgtcatta gcaaaataaa ttatattgcg 60  
tcctacaagc aagttcatgc ttatgtttgt aggggttat tgggagaat aaaatttattt 120  
ccaatagaga agggatggta atcattttat agtcaaataat tatgaaatttga taataattt 180  
gatattgtaa aatctaataa gttgtataaa ttttaaggggta taattataaa atttgatgt 240  
acagtataatg atttttttgt aatcataatg tcatacaaca tcaacctatt atacataata 300  
aaatcgtata atgatgtatg attcataat tggataaaaa gaatgttagg aaagttaagc 360  
aagaggagga ttttaaagtg caaaaaaaaaa taattgcagc tattattggg acaagcgcga 420  
ttagcgctgt tgcggcaact caagcaatg cggctacaac tcacacagta aaaccgggtg 480  
aatcgtgtg ggcaatttca aataagtatg ggatttcgt tgctaaatata aagtcaattaa 540  
acaatttaac atctaatttca attttcccaa accaagtact aaaagtatct ggctcaagta 600  
attctacgag taatagtagc cgtccatcaa cgaactcagg tggcg 645

<210> 16  
<211> 671  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: pMK4 luxABCDE  
Sa2

<400> 16  
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caaattgata gcaatcccnt tcatacaca gcatgaaacta agcgacttat ttcaaagtga 120  
gtatacaaaac aattcgatgtt gatgcactt attttaacat accagaatta agaagcgtat 180  
taaatttagtt gctgaaaaga attatgacca aataagtctt attgaagaac aagaatttt 240  
tggtgatttg attcaagtca atccaaatgt taaagcgaa tcaatttttag atattacatc 300  
ggattctgtt tttcataaaaa ctggattgc gcgtggcat gtgtgtttg ctcaggcaaa 360  
ttcggtatgt gttgcgctaa ttaagcaacc aacagttta actcatgaga gtagcattca 420  
atttattgaa aaagtaaaat taaatgatac ggtaagagca gaagcacgag ttgtaaatca 480  
aactgcaaaa cattattacg tcgaagtaaa gtcatatgtt aaacatacat tagtttcaa 540  
aggaaattttt aaaatgtttt atgataagcg aggataaaat tatggtaaaa ttagcaattt 600

atatgatggg tggcgacaat gcgcctgata tcgtattaga agccgtacaa aaggctgtt 660  
aagactttaa a 671

<210> 17  
<211> 623  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: pMK4 luxABCDE  
Sa3

<400> 17  
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gaagggcgtc gggcgccctt ttcgnattc gcagctgcga aangggatgt gctgaaggcg 120  
attaagttgg gtaacgccag gtttcccag tcangcggtt taaacggcgg ccagtgaatt 180  
cccggggatc aagccgttta agtattacga ccagttata tcattcatgg taaaggacag 240  
ggccttcaaa aagggttaca acaacattt aaaaagcataa agtgttagt acttagaggt 300  
ggtatgc当地 ggaagggttga tttggcgta ccgttgc当地 actaaaataa attataattt 360  
gataaaattaa atagctgc当地 taaaataat gtaaagc当地 aagaatacat ttcaaacatg 420  
ttatggaaa taagcataaa aatttggcaaa atagaaaatac atgaaggcatg ttatctgata 480  
taatggaaac atcataataa taattaaggaa ggatggcat ttatggcaat cgtaaaagta 540  
acagatgc当地 attttggattc aaaaatggaa tctgggttac aacttagt当地 ttttggca 600  
acatgggtgtg gtccatgtaa aat 623

<210> 18  
<211> 671  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: pMK4 luxABCDE  
Sa4

<400> 18  
gatgtatatt cacggggcac atgctgccga aaagcatcac cattaggtgc aatgtcatta 60  
ctattggac gtttttata ttttattgtt actcaagggtt ttgtaaatat gcaattaatc 120  
ggtgc当地 tctttgtatt aattacaggt cctctttca agtcatatga ttatgaaagc 180  
agcatataat attaaaacgc ttataactaa aaagactaaa gcgatgaaat ttccgaaagac 240  
ttaaaagc当地 aaaattttagt attatataac aaaatcatga atataaaatca acaacaaaca 300  
gcagtaagat gattccaaat taggaatgtt tttactgtt ttttctttt acattgttac 360  
ctcttttca atgatttttt ctttactac agatcgccc tatctacata tatctcttta 420  
atttatgc ct当地tcatgtc gttatgtatt atgataataa taattataaa tcgttaacgat 480  
tacgtttaa aaagagagag gttttattat gcattggaca attatcgccg gtggcataaca 540  
gggaaactgca atcgc当地aaa aactattatc aagcggattt acaacagacc gattaacaat 600  
cattgaccca cacgaaactt tttgccaaag gtttaactca tataacaatc gaatagaaat 660  
gccttattta a 671

<210> 19  
<211> 650  
<212> DNA  
<213> Artificial Sequence

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<223> Description of Artificial Sequence: pMK4 luxABCDE  
Sa5

<400> 19  
naccagnnaa aatggtaata aaaatggcag aagnaataaa aaaaggataa agagatccca 60  
aacggtagat agcttagtat aaaatttcg gacaataaaa taaatacggg tttaaccnaa 120  
tttaacggg aaagcacttc agaataatggt gtgttgatc aagaataaaa ttaatgatga 180  
aaatttaacg gagaatagtg tatattgagt agatcaagaa taaaaagata attctactat 240  
tgggtgaaag gcaaataagt agaagattt aagttaatt tctggtgatt taaataataa 300  
tataaatgga agtactgata taaaacttt taacctacta gattcttata atttgcttc 360  
cattttatga cgattttac tcaattgagt gatagaatca aaaaagccat ctcaaaaatt 420  
aatcaagcaa acaacattcc aaacaatgct cgcaaatcac caatgtatca ctctccaatt 480  
acgtaactat gattaattt aagcatagtt attgagggtt tgtatataat agtataaaaat 540  
taatgagaat taaatataat aatgtaaaat tcatcttcgg ggtcggtgt aattcccaac 600  
cggcagtaaa taaaggctgc gacctgtag tatgtatcat attagtggct 650

<210> 20

<211> 677

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: pMK4 luxABCDE  
Sa6

<400> 20  
cggaagaacg ctttgaagnt taagctaatt acatctcatc atatgcacgg agatccttaa 60  
atgccnaatt gaaagatatt tatatgaatc atcgagnncg tcttgatgta gctattgcna 120  
gcagatgata tttgtccagc aataactaat gggaaacaag taaaaggcct ttacctttat 180  
ggtccatttgc ggcaggtaaa tcttttattt tagtgcaat tgccgaatca gctcaaattct 240  
aagaaggtac gttcgacaat tatttattt ccggaaattt attagaacat taaaagggtgg 300  
ctttaaagat gttcttttgc aaaagaaaatt acatcgctgta agagaagcaa acattttat 360  
gcttgatgat attggggctg aagaagtgc tccatgggtg agagatgagg taattggacc 420  
tttgctacat tatcgaaatgg ttcatgaatt accaacattc ttttagttcta attttgacta 480  
tagtgaattt gAACATCATT tagcgatgac tcgtgatggt gaagagaaga ctaaaggcagc 540  
acgttattttt gAACGTGTCA aatctttgtc aacaccatac tttttatcag gaaaaattt 600  
cagaaacaat tgaattttaa aatgattggt gtataatgaa tacaatctt aatcgtttaa 660  
atgattgaag acaagat 677

<210> 21

<211> 622

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: pDL289  
luxABCDE Sp1

<400> 21  
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cgccgcctt ggttacttgt tgtcaattt accatgnaat aaagtaagcg gacatggat 120  
aatagntagg tcgcaacgtt ctttcgctaa gttacgaact tagattggag gtgagcgccc 180  
aatacgcaaa ccgcctctcc ccgcgcgttg ccgatttatt aatgcagctg gcacgacagg 240  
tttcccgact ggaaagcggtt cagtgagcgc aacgcaatta atgtgagttt gctcaactcat 300

taggcacccca aggctttaca cttagtgcctt ccggctcgta tggtgtgtgg aattgtgagc 360  
ggataacaat ttcacacagg aaacagctat gaccatgatt acgccaagct atttaggtga 420  
cactatagaa tactcaagct atgcatccaa cgcgttggga gctctccgga tcaggtcatt 480  
cgagttaccg atttatcaca tagatgatat ggttaagattc agttagaaga aagagtcaca 540  
aacacacttt gtggctttt tatttccata aaaatggtaa aatagtagga gtagaaatgg 600  
agttcgagac atgaaagtaa ta 622

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<210> 22
<211> 610
<212> DNA
<213> Artificial Sequence
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<220>  
<223> Description of Artificial Sequence: pDL289  
      luxABCDE Sp5

```
<400> 22
agacaaaagaa cgtccgcccct tggtaacttgt tgtcaaattt gaccatggaa taaagttaagc 60
ggacatggta taatagctag gtcgcaacgt tctttcgcta agttacgaac ttagattgna 120
ggtagcgcc caatacgc当地 accgc当地 cccgtagcggtt ggccgattca ttaatgc当地 180
tggcacgaca ggttccc当地 ctggaaagcg ggc当地 gac当地 taatgtgag 240
tagctcactc attaggcacc ccaggctta cactttatgc ttccgctcg tatgttg 300
gaaatttgtga gcggtataaca atttc当地 caca gaaacagct atgaccatga ttacgccaag 360
ctattnnactt gacactatag aatactcaag ctatgc当地 aacgc当地 ttgg gagctctccg 420
gatcgctc当地 cagggtc当地 aacacgccc当地 catccggcgca agtggctg gaccaatgc当地 480
actggaaaga agagagctcg ggc当地 gagagaa cgtc当地 gagggcg aggggtggcc gtgaggcg 540
cgaaaagcga aacgccc当地 atggccaccg ccagtgc当地 cttgc当地 cgttggcat 600
ctqccctqcat 610
```

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<210> 23
<211> 626
<212> DNA
<213> Artificial Sequence
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<220>  
<223> Description of Artificial Sequence: pDL289  
      luxABCDE Sp6

```
<400> 23
atgcttccgg gntcgtatgt tgtgtggaat tgtgagcggaa ataccaattt cacacaggaa 60
acagctatga ccatgattac gccaagctta tttaggtgac actatagaat actcaagcta 120
tgcacccaac gcgttggag ctctccggat caaaatgaca atcggcagca tgtgcggat 180
ggattatgcg agtcggacat cttgcctagg acgcgcggca actgggagca gcccttcatc 240
aaggagtaca gcaaattcatt gccgcgtgcgc ggcattgaaact cgtgggcttc aaagcttgc 300
cacatcttct tgcgggcaaa gataccggca ataccgagga tgaggaccac tagcgagata 360
aggaaaggaa cgttgagccc gtgccagagg gcaagggtgcg aatgtatgctc caatcccacg 420
gcagccactg catcatcgat cggggcatca aagagcccgaa gcacaaaatac cagcggcaga 480
gacataaaagc cccggcaaagc tgcaggtagc cacagcgaca ctggtgcttc atggacatct 540
cccatgtcgc gaggtccgtc aaagaaggcg ccgaagacaa tctttgcggaa gtaagtaaag 600
gtqaagaacg caccgatacc ggcaac 626
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<210> 24  
<211> 607  
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: pDL289  
luxABCDE Sp9

<400> 24

gcaaggcctt gagtagctt atccagactg aaggcccgt atcttgaa ggcaggat 60  
aaaagaagat tctgtgcag agcggccga acgagtaggc tatgtgcgc aaaatccaa 120  
tcaaattgatt tcaaccaata tgattttga tgaggtggct ctggactcc gtttgcgagg 180  
tgtggacgag cagaaattg aaacgagagt ctatgaaacc ttgaaaatct gtggtctcta 240  
tgaattccgt aattggccca tttctgcctt gtcatttggt cagaaaaaac gtgtgactat 300  
tgcctcaatt ttggctttag ggcgtgaaat tatcctccta gatgaaccga ctgcgggtca 360  
agaccagaag aactatactg agattatgaa atttctcgaa gaactgcata aacaagggca 420  
taccattgtc atgattaccc atgatatgca attgatgctg gattattcag atcgagccct 480  
tgtcatggtg gatgggaat tgattgtga tactgatcca gctagtcgt tgagcaatcc 540  
ttagctgtta gtaaaagcca acctaaaaga gacttctatc ttcaacttgg ctaagaaact 600  
cgacgtg 607

<210> 25

<211> 616

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: pDL289  
luxABCDE Sp16

<400> 25

tgaatgttcg gtacgcacca gtcttcgtct gctctcaagg acgtggacat tcatgatgga 60  
tttgcacta cgaagatgac ctaagtcagt ncaagaagaa attattaaga aaaataaagg 120  
tgaagactta atccgtcctc actctagaag gaagtcactt agtggctcc ttttgcctt 180  
agaaaatacc tctaaatatg gtaaaatagt agaagaataa tgtgaggaaa atgaatgtca 240  
aatagttttgc aaattttgat gaatcaattt gggatgcctg ctgaaatgag acaggctcct 300  
gtttagcac aggccaatat tgagcgagtt gtggccata aaatttagtaa ggtatggag 360  
tttcatttcg tattttctaa tattttaccg attgaaatct ttttagaatt aaagaaaggt 420  
ttgagcgaag aattttctaa gacaggcaat aaagctgttt ttgaaatattt ggctcggtct 480  
caagaatttt caaatcagct cttgcagttc tactataggg aggctttctc tgaaggtcca 540  
tgcgttagtc aaggtttaa gtccctttat caaaatttgc aagttcgtgc tgaggtaat 600  
cagctattta ttgaag 616

<210> 26

<211> 609

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: pDL289  
luxABCDE Sp17

<400> 26

tggaaaaagca gggctatgtg aagcgctggc gccgancccc gatgtgagc gtcgcaccct 60  
cgctgcctcg actgcngacg ggcgcctccct ccgcacccgc gccgaatgca tccccgaagc 120  
catggccaag gcctataagg aggtaggcct cgacccttgc gagttcaaga aatcgctgac 180

atcctggccg gcgtgcctgt ggacgtggag ctgccgtggc catctgggga tgactttgtg 240  
ggttaaagtg tggccttcat atagcagatg aggacggcta tactggctta agagtttga 300  
ctctatttac gtaaaattt ttcacactat gagaggaggg gccatggcta cagcagtaga 360  
cgtcgcgcag gttatctaca acaaactggg gtgggtcgat gcgtggaagc tggagaagct 420  
tacgtattac tgccaagcgt ggagcctggg ctggtacggg cgacctcttgc tctcgaatga 480  
atttcaggcg tggaaaggacg gtccgggttga acccgacctc tatcgcgaga ataaatatca 540  
acgctccgag aaatcctcca cggtgttacc gggagctgat gtagaggcta taggggagga 600  
agccgaaaa 609